

Strategic Evolution of ESE Data Systems

Lifecycle Study Report

**Matt Schwaller
NASA/GSFC
schwaller@gsfc.nasa.gov**

**SEEDS Second Public Workshop
June 17-19, 2002**

Why Data Lifecycle?



- ❑ NASA policy calls for the Agency to “collect, announce, disseminate, and archive” all scientific and technical data resulting from NASA and NASA funded research
- ❑ ~2 TB of data added to the ESE archives every day
 - LTA of these data has been allocated to NOAA and USGS
- ❑ Various scientific and policy-making groups have reviewed ESE long-term archive plans
 - These reviews found that actual implementation of LTA agreements has been less than completely successful
- ❑ SEEDS data lifecycle is takes a “cradle to grave” view of science data generation and archive for products funded by NASA’s Earth Science Enterprise (ESE)
 - To improve the prospect of successful LTA for future missions

SEEDS Lifecycle Study Objectives



- ❑ Establish lifecycle guidelines for ESE policies and procedures
 - Incorporate lifecycle guidelines, policies and best practices into NASA Policy Directives, Announcements of Opportunity, NASA Research Announcements, etc.
- ❑ Promote orderly process to support data products throughout the active mission lifetime and into long-term archive
- ❑ Ensure safe handling of SEEDS-era data products as they migrate from data providers to active archive and long-term archive, even if numerous individuals and institutions take responsibility for the product during its life-cycle

Results So Far

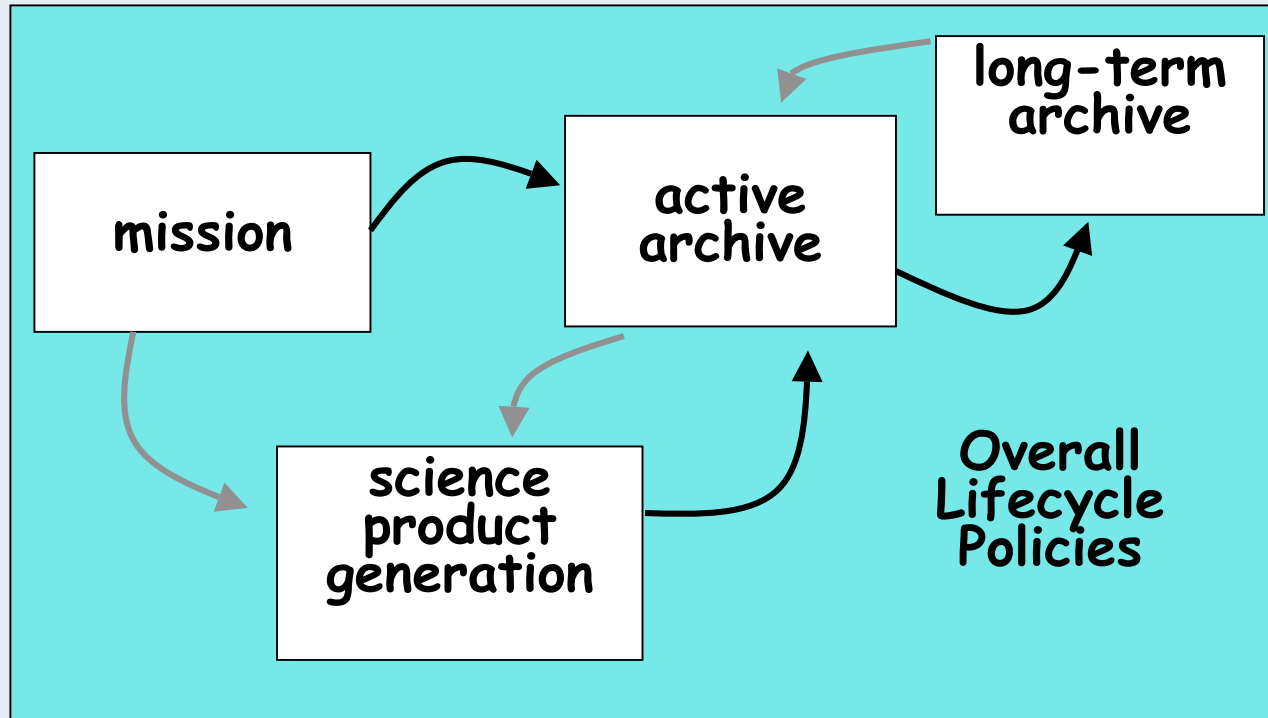


- ❑ Study team established, with USGS/EDC participation
 - EDC has practical experience in LTA of NASA ESE products
- ❑ LTA/Lifecycle Workshop held with EOS Science Working Group on Data (SWGDD) in January/February this year
 - Led by Graham Bothwell and Robert Wolfe with SEEDS support
- ❑ Workshop results were incorporated into a draft set of SEEDS lifecycle guidelines
 - Copies distributed to lifecycle panel last week, available during this afternoon's breakout session
- ❑ The workshop this week will let us see if we "got it right"
 - Break-out session this afternoon will focus on draft guidelines document

Breakout Session Preview-1



- Lifecycle guidelines are based on a simple model of four major lifecycle entities within a context of an overall set of guiding policies



- Recognizing that some of these functions may be grouped together in any given mission or project
- Guidelines are provided for each of these entities, for the (bolded) interfaces between them, and for “overall” policies

Breakout Session Preview-2



- ❑ Panel members represent the lifecycle stages of a notional project/mission
 - Graham Bothwell NASA/JPL -- Project/Mission Manager
 - Jon Christopherson USGS/EDC -- Spacecraft/Pre-launch
 - Robert Wolfe NASA/GSFC/MODIS -- Product Generation
 - Steve Kempler NASA/GSFC/DAAC -- Active Archive
 - Ben Watkins NOAA/NCDC -- Long-Term Archive
- ❑ Breakout session will include some combination & permutation of...
 - Panel presentation, panel & group discussion (plenary and in sub-groups)
- ❑ Goal is to provide comments on the draft recommendations and guidelines so that they can be revised and finalized

Next Steps



- ❑ Immediate: based on results of this workshop...
 - Refine and revise the SEEDS lifecycle study guidelines and recommendations
- ❑ Near term: integrate study results with other study results
 - Especially on lifecycle parameterization of the SEEDS cost study
 - Contribute to and draw on results of reuse, metrics and standards studies
- ❑ Next year: continue study with NOAA participation as funds and interest allow
- ❑ Also next year: draft language for NPDs, AOs, etc.